Portable ND-YAG Laser Tattoo Removal machine User manual

Read this manual carefully before use of laser,

Retain it for future reference

Beijing Oriental Wison Mechanical & Electronic Co. Ltd

For your safety

1. The operator must read the user manual carefully before using the equipment and performing any treatments.
2. Fill this machine with water before turning it on or it will overheat and void warranty.
3. Clear all reflective material out of the treatment room, such as earrings, watch, rings, mirror and etc.
4. Remove flammable items such as cosmetics, alcohol, nail polish remover etc from the skin before treatment. We recommend cleaning the skin with soap and water.
5. All flammable and potentially explosive items should be removed from the operative area.
6. The operator and the patient must wear the professional protect glass and goggle.
7. Any inappropriate operation may cause injury. In the course of the treatment, the operator should observe all warnings and operate according to the indications of the user manual.
8. The patient should be informed of the indications for the treatment, the potential risks and complications.
9. The patient should take off all metal or reflective jewelry or decorations, such as: earrings, rings etc. during the treatment.
10. The patient must wear the professional protective eye device. It is forbidden to look at the laser light even with professional protective glass or goggles on.
11. Please keep the power source line, the laser handle and the probe in a clean and dry condition.
12. Sterilize the probe with alcohol before it is used.
13. Do not open the machine without authorization by the JS Company.
14. The absorption of laser light varies with the amount of pigment in various pathological conditions. Energy settings should be chosen so that the proper treatment can be achieved with the lowest setting.

Contradictions:

1. Pregnant woman.
2. Patient with history of hypertrophic scars or keloids.
3. Patients with liver disease, bleeding tendency, diabetes and mental disease.

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Brief introduction

- Treatment Theory

Eliminate spots, remove tattoos: The specific laser wavelength will effect on and melanin of epidermis and dermis. The pigments will begin to swell and explode to tiny particles after absorbed this high energy laser. One part of them will be shot out of the body, the other parts will be gradually removed by metabolism.
Tighten skin, contract big pores: Spread specific fine carbon on face, after absolutely infiltrated in pores, then to shoot; it's easily burst the carbon particles to break out the spots and cutin of epidermis. The heat will stimulate re-growth of collagen, to tighten skin and shrink pores.

- Application

To wipe out tattoos, to eliminate eyebrow cleaning, eye-line cleaning, age spots, birthmark, ect.

- **Main function**

Nd yag laser is for tattoo removal and skin whitening with carbon mask. Laser has three treatment heads: 1064nm/532nm/1320nm.

1064nm---for brown and black tattoo removal

532nm---for red, green and colored tattoo removal

In addition, coffee is the mixture of black and red tattoo. You need use 1064nm to remove black tattoo first and then 532nm to remove red tattoo. 532nm mustn't be used first because 532nm will be oxidized with black tattoo.

And besides these two treatment heads, yag laser has another function: skin whitening (1320nm) with carbon mask. We called it black moppet. It has powerful function in skin whitening and skin rejuvenation. We could send you laser treatment head for free, but carbon mask should be assumed by yourself.

- **Technical Parameters**

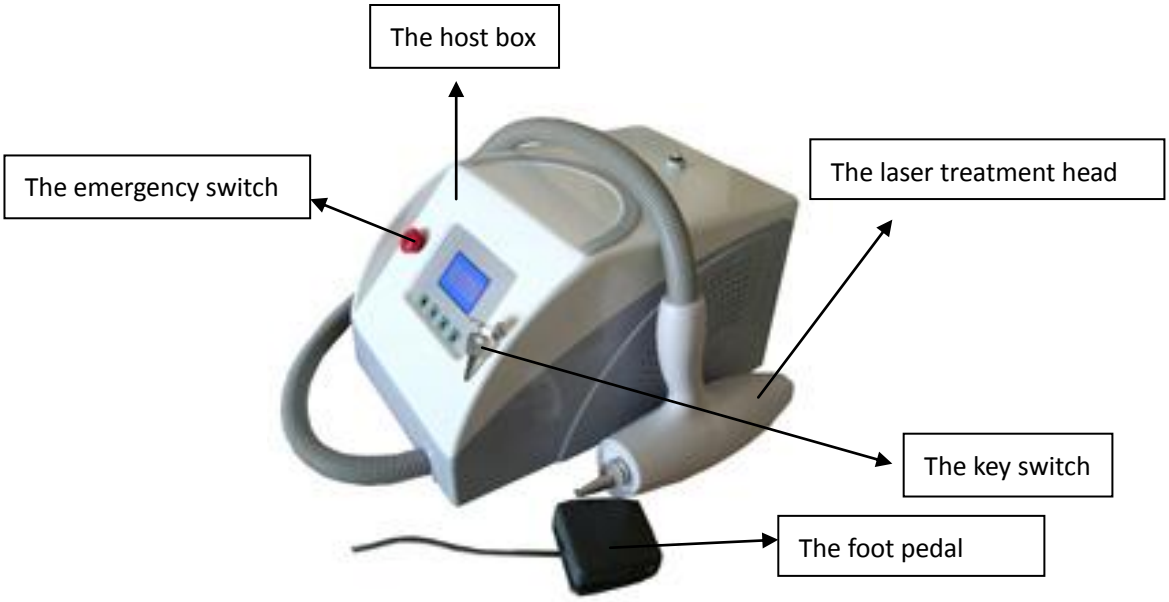
Laser type	Q-switched ND:YAG laser
Energy	01-50
Laser wavelength	532mn,1064mn, 1320nm
Frequency	1-5Hz
Cooling system	Wind cooling +Water cooling +Semi-conductor
Light source	220V/110V 50Hz/60Hz

- **Features**

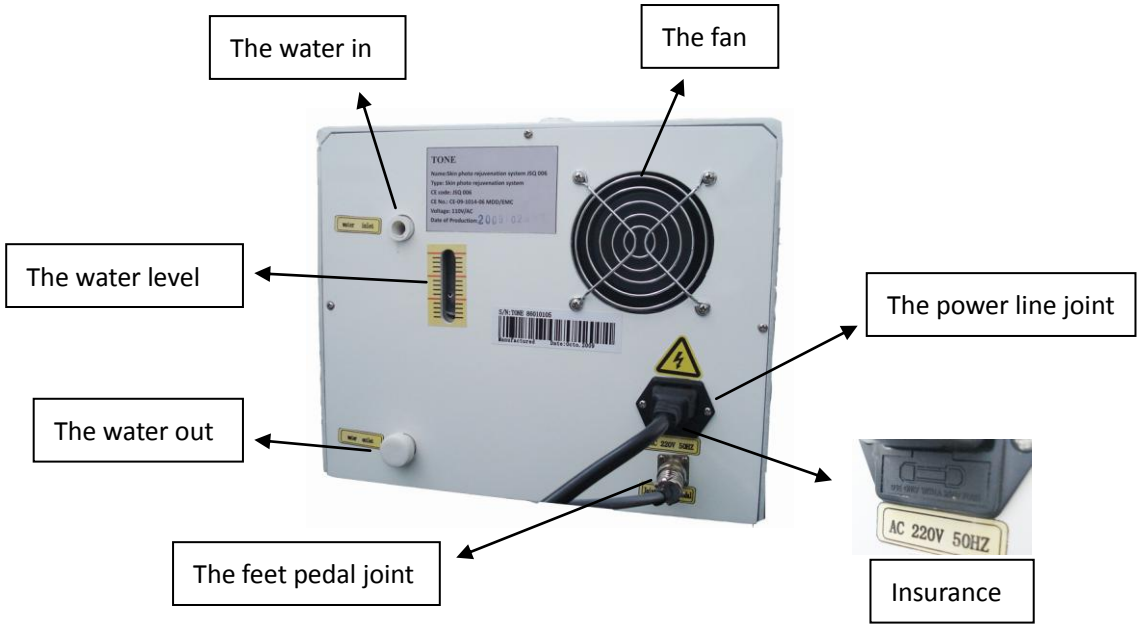
Moderate treatment, no risk of scars and wound. It's the most moderate laser treat. No side effect, no recovery time, back to work at once.

Overview machine

a) General features



b) The back of the machine



Remarks:

1. The emergency switch: for the security of both patient and operator
2. The key: main switch for on or off the machin

3. The laser treamtment head: for treatment
4. The foot pedal: for operation
5. The water in/out: for filling water
6. The water level: for checking water level

c) Other parts

protective glass

Laser head

Goggle

How to install

Notice:

Please lay machine down on the level ground, before installing this machine, Visally check the surface of the machine for any defects. Check the buttons and joint for any loosening.

a) How to fill the water.

Insert the white tube into “the water in” while you watch “the water level” Stop filling the water when the water level reaches two thirds. After filling, fix the cap.

b) Starting

Connect the power supply

Install the foot switch: Install the foot switch connected to the step interface.

Switch on: Only do this after the above has been completed, insert the key and turn it to the left. When the machine is on, the water inside will circulate and the cooling system starts automatically.

Check: Observe whether the instrument is leaking. If a leak is seen, immediately shut off the power or contact the dealer.

Notice:

In order to guarantee the safe operation of the system, USE ONLY DISTILLED WATER in the cooling system.
When infusing distilled water do it according to the above-mentioned steps and then start the system.
Do not allow the water temperature to get below 5^0 C ($4l^0$ F)

Attention:
Moving the machine Follow these steps:
- **Pull out the power supply plug**
- **Put the treatmant head on the stand**
- **Loosen the truckle brake**
- **Push or pull the equipment slowly by its handle**

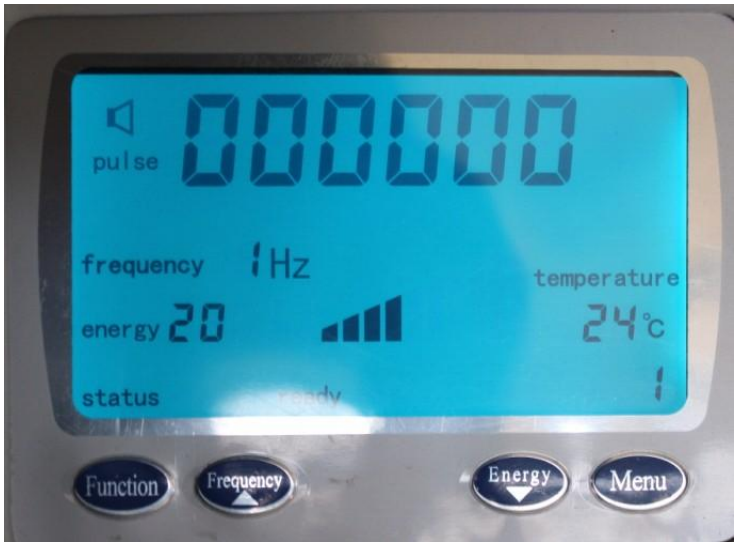
Operation

Install the correct probe on the handle, turn on the key for ND-YAG laser, the screen will show as follows:

Wait the menu to enter into system, showing as following:

Setting parameters

Press “Function” menu, then standby will change into Ready, show as following:



Step on the foot-pedal, do treatment

Return back: release the foot-pedal, press “Function “menu, then return to Standby.

- **Pre-operation**

1.Clean skin

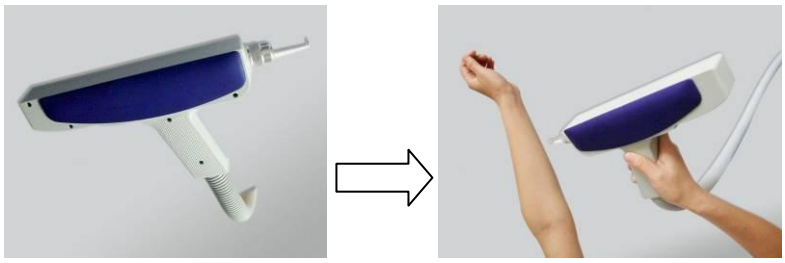
- **Operation Steps**

a. Filling water.

b. Choose Treatment head:1064nm or 532nm, Then fix it in the laser handle

c. Turn on the key switch and the laser control switch. Adjust the parameters, Point the laser output to the treatment area to adjust parameters, we suggest “energy” from 10.

Attention: During the treatment, Patients should be coordinated with operator, don’t move, do not open eyes, the distance between probes and treatment area is about four fingers (about 12cm), and the laser handle should be perpendicular to treatment area. Show as following picture:



- **Treatment courses**

The pigment in tattoo has two kinds; one is chemical pigment and another botanic pigment. Usually for chemical, we need about 3-6 treatments; and for botanic, it is much easier, only 1-2 treatments is OK. And only when you finish first treatment, you will see good treatment effect. The interval among the treatment is 3 weeks. Or you could see if the patients' skin is suitable to start treatment again.

Notice:
When you uses the Q532nm (green light), it is best to be set it on CLOSE to avoid damage from the direction light,.

Warning:
When the system is in the working state by pressing Function, the laser head must aim at the treatment area before the Foot Switch is pressed. This way the laser head can't accidently hurt anyone.

When you want to pause or stop a treatment press STOP to switch to the waiting state, thus avoiding accidently pressing the Foot Switch. The laser can cause permanent damage to the eyes

DO NOT aim the treatment head at the operator or the patient whether there is laser output or not. NEVER watch the opening of the laser treatment head. When the laser comes out, it is absolutely forbidden to aim the laser treatment head at any place except the treatment area especially places such as eyes etc

When the laser is not in use, switch off the laser treatment system in strict accordance with the operation requirements.

Operation Skill:

Notice：

First, please find out if the customer has a history of hypertrophic scars or keloids, if he or she has ever had chemical peels or allergic skin, if he or she

has a tattooed or covered eyebrow, or if you observe scars in the treatment area.

Do your best to avoid unwanted disputes caused by the fact that patients don't understand the circumstances in and after the treatment and the recovering course.

The treating operator must explain to the patient in simple terms, about the treatment principle and the circumstances that may appear in and after the treatment

Explain to the patient that sun exposure will cause pigmentation and it may persist for a significant period of time after the tattoo has been removed. Further treatment will be necessary in one month and a half.

If there is a multicolored tattoo or chemical pigment treatment used by the tattooist, again it will also need to be treated again in one month and a half.

A light-colored mark may be left after blue and black pigment is removed, for this pigment includes the iron and lead ion

Before removing the eyebrow tattoo, the operator may shave off the eyebrow first for the observation in the treatment. For the large-area tattoos and Nevus of Otta, we suggest treating separate parts at different times in order to avoid the patient's discomfort caused by severe reactions. You can help the patients build up confidence in further treatments by showing them the contrast between the treated and untreated areas.

When treating the tissue of very dark and deep-layer tattoo with the 1064nm laser, a sudden pigment crack with a sound may occur, because melanin can absorb the laser energy .strongly. The pigment in the shallow layer of the skin absorbs the energy and makes the epidermis crack. Bruising can be found in .a few people with thin skin. It is normal reaction for the skin color to become very pale with the first treatment, but it will recover in about ten minutes. The macrophage ingestion of and the transport the pigment, can occur over a long time but the color of the tissue will eventually become lighter, so we suggest further treatment in one month and a half. When removing the eye lines tattooed, definitely do it twice, because there is more water in the eyes.

When treating black and blue pigmentations with 1064nm laser, the hair fades and may fall off after treatment. In about two weeks new hair will grow on the skin and will even grow thicker temporarily than before and then will get normal later. Slight edema appears on the treated area, from where there is bruising. It is normal that the treated area gets itchy or even hard when touched after the treatment. All the bad reactions will disappear in two weeks

or about one month, and that depends largely on the concrete conditions of the patients.

When treating brown and red pigmentations with 532nm laser, the surface of skin gets vaporized and white, the epidermis gets necrotic, faded or colored after the radiation, for the tissue's hemoglobin is absorbed by the 532nm laser energy.

When treating brown and red pigmentations with 532nm laser, the dermis which contains capillary vessels crack and form a bruise or purpura, even a scab or eschar. The recovering time depends on the patients' conditions but generally in about 20-60 days.

For 1-3 days after the treatment it is forbidden to apply makeup to the treated area ie: eyebrow or wash with area with water etc. Sun exposure should also be forbidden in order to avoid hyper pigmentation. As for the patients with any bleeding or serious swelling, they should use erythromycin or clindamycin ointment on the troubled areas to help heal up in 72 hours after the operation. The patients is encouraged not to have hot spicy food or drinks of alcohol for a week after treatment.

Treatment files should be kept for all patients or customers.

a) Remove the eyebrow tattoo

1. Firstly, find out if the customers have a history of hypertrophic or keloid scar formation, or have had chemical peels or have allergic skin, or are of covered eyebrow or have removed their tattooed eyebrows in other methods before. If the answer is yes, a large spot size can be used for removing the eyebrow tattoo, but it do not use bruising or ecchymoses as your end point to be reached.

2. When removing eyebrow tattoo, shave off the eyebrow first. The optical frequency to be set is 5Hz and the distance to be kept between the treatment head and the skin is 4-5 cm.

3. Use the 1064nm laser is used to remove a black or blue tattooed eyebrow. If the color appears again in 5-10 minutes, wash it again. Choose the larger energy to break up the pigment further and promote the absorption of the tissue. Have another check-up in one month and a half and see if there is faded pigment or light pigment. If the answer is yes, please carry on a treatment further.

4. The pink eyebrow tattoo can be removed with 532nm laser directly.

5. Remove the scarlet red or brown eyebrow tattoo with 1064nm laser first, and do it again with the 532nm laser. Carry on another treatment in one month and a half with the 532nm laser.

6. When removing eyebrow tattoos, removing medical liquids, or if there are flaws on the skin, let the treatment head get close to the skin and angle the treatment head. One treatment is okay, in a month and a half carry on treats once more.

7. If the tattooed eyebrow has existed for a long time, and for in which the pigment contains iron ion, a light-colored mark may be left after the blue and black pigment is eliminated. Treatment may be carried on in one month and a half.

8. Don’t stop treatment until the pigment is completely removed. We suggest treatments in a one-month-and-a-half cycles.

9. Treatment times suggested: 1-3 times.

b) Remove the eye line tattoo

1. Strict eyeball protection is a must, for any damage to it is permanent.

2. Set the light frequency at 5Hz, select low energy and small light spot and keep a distance of 4-5 cm between the treatment head and the skin. The operator can use one-centimeter-thick gauze to cover the patient’s eyeball, lead eye shields or contact lenses.

3. When removing the lower eyelid line, ask the patient to close eyes tightly, and let the eyeball move upwards. Press the gauze with the forefinger, press and push the upper eyelids upwardly; push the lower eyelid downwardly to reveal the lower line with the middle finger and carry on prompt treatment with light frequency of 5Hz. Please tell the patient not to move but when he or she can’t endure, the doctor should stop temporarily.

4. When removing the upper line, ask the patient to close eyes tightly, and let the eyeball move downwards. Press the gauze with the middle finger, press and push the lower eyelids downwardly; push the upper eyelid upwardly to reveal the upper line with the forefinger and carry on treatment with light of 5Hz.

5. Do your best to avoid anesthetic. Carry on the treatment on the darker area in one month and a half.

6. Don’t stop treatment until the pigment is get gone completely. We suggest treatment in a one-month-and-a-half cycle.

7. Treatment times suggested: 1-3 times.

c) Remove red tattoo, lips and lip line tattoo

1. When removing red tattoo lips and red lip lines, choose one corner of the mouth first for experiment. With the laser on, the spot in experiment will get black immediately because of the iron in the pigment. Further treatment is not allowed.

2. Light frequency is to be set at 5Hz and a distance of 4-5 cm is kept between the treatment head and the skin.

3. For black, scarlet red and the deep coffee lips, please remove them with laser of 1064nm and do it again with laser of 532nm. In one month and a half, carry on another treatment with laser of 532nm.

4. For pink and red lips, remove them directly with laser of 532nm.

5. Notice: Further treatments to the lips and lip line tattoo should be carried on in half a year, otherwise the treatments will fail.

6. Don’t stop treatment until the pigment is gone completely. We suggest treatment in a one-month-and-a-half cycles.

7. Treatment times suggested: 1-3 times.

b) Remove Deep Tattoo

1. The light frequency to be set is 3Hz or 5Hz; Distance to be kept between the treatment head and the skin is 4-5 cm, and try your best to choose the small light spot and high energy.

2. The operation skill same as “Remove Eyebrow Tattoo”.

3. For large-area tattoo, it is okay to remove them at one time in order to avoid skin swelling and blister.

4. Don’t stop treatment until the pigment is removed completely. We suggest treatment in a one-month-and-a-half cycle.

5. Treatment times suggested: 1-4 times.

e) Remove the age spot and the nevus

1. The light frequency to be set is 5Hz and the distance between the treatment head and the skin is 4-5 cm. Choose small light spot and high energy.

2. Remove the age spot with laser of 1064nm at first. When the bruising point is reached, stop treating. If it is not effective, please use laser of 532nm for a change.

3. Remove the nevus with laser of 1064nm. If it is not effective, use laser of 532 nm for a change and carry on the treatment till the bruising end point is reached.

4. Don’t stop treatment until the pigment is completely gone. We suggest treatment in a one-month-and-a-half cycle.

5. Treatment times suggested: 1-2 times.

f) Remove the birthmark and nevus of Otta

1. The light frequency to be set is 3Hz or 5Hz, the distance between the treatment head and the skin is 4-5 cm. Choose the small light spot and high energy.

2. Remove with the focus till the bruising end point is reached.

3. It is the best choice to carry on the treatment with laser of 1064nm.

4. Don’t stop treatment until the pigment is gone completely. We suggest treatment in a one-month-and-a-half cycle.

5. Treatment times suggested: 3-5 times.

g) Remove the CAFÉ-AU-LAIT-SPOTS, freckles and yellow brown spot

1. The light frequency to be set is 3Hz or 5Hz, the distance between the treatment head and skin is 4-5 cm. Choose the small light spot and high energy.

2. Remove the spot continuously portion by portion for about 15 minutes with the laser of 1064nm.

3. Avoid treatment during the summer months i.e. June, July, August and September.

4. This machine can be used for the yellow brown spot, but carefully, for there may get rebounding hyperpigmentation.

5. Don't stop treatment until the pigment is gone completely. We suggest treatment in a one-month-and-a-half cycle.

Treatment times suggested: 2-5 times.

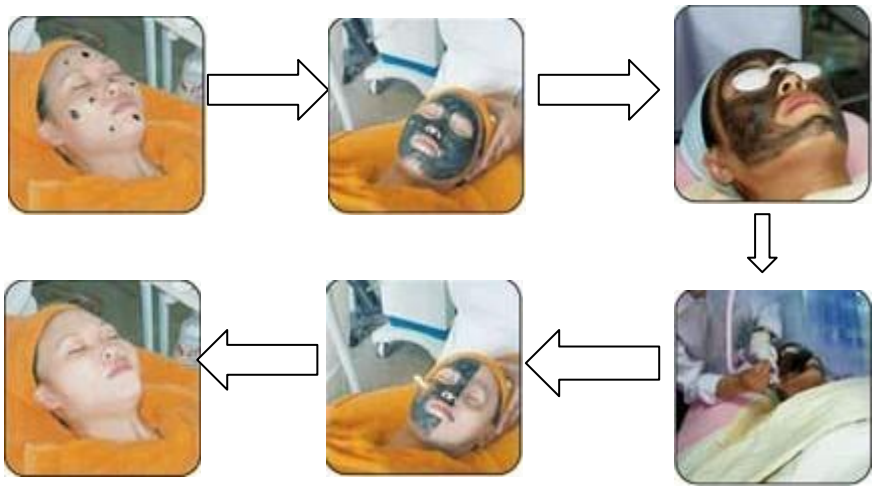
h) Skin rejuvenation

Choose Treatment head: 1320nm professional black moppet big head. Then fix it in the laser gun. The operation steps are as follows:

1. Spread professional black moppet carbon powder on face, after 30-40 minutes, and then begin to treat. From spread powder to finishing the treat, the whole operation is about 50-60 minutes. Each treatment does not need too long time.

2. The laser treatment is very moderate; it's s step by step operation. Every 2-4 weeks as one treatment.

Treatment process as the following photos:



Skin care after treatment

a) Uncomfortable Symptoms in 3-5 days after treatment

1. The face will be redness or become swollen, which is a role of heat that will

promote collagen regrowth. Pay attention: never make ice cooling at this time, just wait for 20-60 minutes, they will be gradually disappeared.
2. The skin is very dry, so you have to pay more attention to keep moisture of skin.
3. Some people will have a little allergic to carbon powder; you can rub some external medicine.

b) Cosmetic and skin care products

1. Do not clean face with too hot water and irritant clean products;
2. Choose some moisture lotion and sun protection lotion for skin care;
3. Use some moisture essence, such as Hyaluronic Acid,B5 for skin repair

c) Daily Life

1. Do not to go to High temperature places in 3-5 days after treatment, such as sauna, Hot spring, sunbathing
2. Do not smoke, drinking, stay up all night
3. Pay more attention when make-up remover.

The method of maintaining

Notice:

You should switch off the machine and disconnect the power supply before maintaining it, Maintenance with the machine on will lead to injury to the body or damage to the equipment.

The owner/operator will be responsible for the damages caused by the following reasons:
Dismantling the outer covering or the accessories without authorization; sabotage; system failures caused by operation failure or maintenance exceeding JS Company's authorization; other system failures caused by natural disasters, such as fire, electric power system failures, lightning, flood, explosion, acts of terrorism etc.

a) Cleaning the equipment

You should clean the surface of the machine with wet towel for at least one time a week. Neutral detergent can be used, but be careful not to let the liquid leak into the machine.

b) Cleaning lens of the laser treatment head

You should give a periodical check to the lens and see if it is clean. The pigment grain from the skin may get to the lens In the process of the treatment and affect or even weaken the output of laser. So please clean the lens gently with soft clean cotton cloth or cotton on stick dipped in absolute alcohol before starting this machine.

Beijing Oriental Wison Mechanical & Electronic Co. Ltd

Tel: 0086-10-81518268 Fax: 0086-10-81533136

Three Year Warranty

DATE: 2012-09-28

(From 2012-09-28 to 2015-09-28)

This is to certify that all the machines manufactured by Beijing Oriental Wison Mechanical & Electronic Co. Ltd. are warranted by following terms:

1. Within guarantee period (3 years) we provide free fittings. Such as those consumable fittings like water pipe, foot pedal, eye patch. But not including laser xenon lamp.
2. As for some big problems, such as power source and screen controller are broken, if the fails cannot be repaired, we will change a new machine.
3. As for problems with accessories, such as handles, we shall be responsible for the change and freight. If they are man-made destroys, the customer should undertake the cost of both accessories and freight.
4. As for repair of the machine, within 3 years, if the machine needs to be sent back for repair, we will be responsible for repair, including the changes of accessories; both of them are free of charge (not including xenon lamp). And we will be responsible for the freight of sending back.
5. As for term 2-4, customers have responsibility to provide video or photos of the broken machine or accessories, so that our engineer can give suitable suggestions to solve the problem properly.
6. 3 year later we offer to repair the machine. The repaired parts will be charged.
7. We are not responsible for man-made destroys. Such as no circulation of water (which causes lamp burnt) or dropping the handles on floor (which breaks some parts).
8. If the buyer has any questions from our technical department, we will give you great technical support.

Buyer Contacting Information:

Beijing Oriental Wison Mechanical & Electronic Co. Ltd
Date: 2012-09-28